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EXAMINER
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DETAILED ACTION

Response to Amendment

Claim Objections

Claim 16 is objected to because of the following informalities: claim 16 ends with

"**; and.**" As amended by applicant. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 1, 16, and 22 are rejected under 35 U.S.C. 112, first paragraph, because

the specification, while being enabling for "predicting", does not reasonably provide

enablement for "for which contents of the location in the new version of firmware was

not able to be predicted". The specification does not enable any person skilled in the art

to which it pertains, or with which it is most nearly connected, to "changing contents of

the location in the new version of firmware into distance information and compared to

old version of firmware to predict the new nodes" the invention commensurate in scope

with these claims. See, response to arguments below for further explanation.

Response to Arguments

Applicant's arguments filed 2/21/2010 have been fully considered but they are

not persuasive. In regards to applicant's arguments and remarks, wherein the claims

related to an update package of firmware between an old image and a new image files;

Predicting differences between old and new images of data that are converted into

binary images to determine locations of code segments in new image...having this

information, predicting the new nodes symbols offsets when changes back to nodes and

not binary code, The predicting being difficult and inaccurate and therefore making new

node information of those differences that could not be predicted, therefore making

information into distance information to determine location and range values.

Unfortunately, the claim language is reasonably broad that the combination of Sahinoja

et al. and Aghera et al. reads on the claim language as understood by the examiner,

wherein the claims state updating firmware of a device by comparing nodes from old

version and new version or patches that need to be updated in the old version by

executing an update to the memory and replacing that stack or address area that are

determined to be updated, of course, the size is an issue when updating and depending

on that, measures are taken to push or adjust stacks below or above depending on

area/patch being updated by the system to the device. This is to say that the normal

protocol of updating firmware on a device is used by replacing only those parts of the

old version that need to be updated after determination is made that it needs to update

specific areas in the OS, operating system. the dependent claims recited similar

language and therefore the cited reference is sustained.

   Examiner's note: It is noted that the claim limitations do not further limit the

limitations talking about the predicted and not predicted nodes or how the distance and

range values are related in claim 1 or 16 as to what claim 22 is disclosing, further

consideration as to how to better word those limitations is suggested. The word

"predicting" is too broad but yet the applicant's specification relies on that word and

associated definitions heavily but fails to transfer those ideas into claim language. The

examiner welcomes a telephonic interview to overcome some of the difficulties of the

claim language. As far claim 19, the applicant asserts correctly as to the typographical

error.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Sahinoja et al. (US 20030204640 A1), and in view of Aghera et al. (US 20040098715

A1).

Regarding claim 1. a mobile services network (abstract, fig. 1, 5; client 30,

paragraph 51; Sahinoja et al. shows network and mobile terminals) comprising:

a mobile electronic device (mobile terminal fig. 5 element 30, Sahinoja et al.

shows mobile device);

an update package repository (¶: 13, Sahinoja et al. teaches server sending

update package to mobile terminals, hence, update package repository);

Management server (abstract, Sahinoja et al. teaches management server),

generator with nodes preprocessor, which generates a package of update

information (¶: 16-19, fig. 4; Sahinoja et al. teaches hierarchical structure of a plurality of

nodes and generating section of response to be transmitted); and

However, Sahinoja does not discloses wherein generating comprises predicting

the contents of locations in a new version of firmware based on differences in

addresses identified between corresponding symbols in an old version of firmware and

the new version of firmware, and identifying as nodes corresponding locations in the old

version of firmware for the mobile electronic device and the new version of firmware for

the mobile electronic device, for which contents of the location in the new version of

firmware was not predicted; nevertheless, Aghera et al. teaches generating comprises

predicting the contents of locations in a new version of firmware based on differences in

addresses identified between corresponding symbols in an old version of firmware and

the new version of firmware (¶: 57-59, Aghera et al. teaches blocks are set for DSP

Patch Version for a particular patch followed by memory address of DSP Patch Data for

that particular patch, as shown in Fig. 10), and identifying as nodes corresponding

locations in the old version of firmware for the mobile electronic device (¶: 58-60,

Aghera et al. teaches loading information in said memory of device by loader) and the

new version of firmware for the mobile electronic device (¶: 58-60, Aghera et al. teaches

loading information in said memory of device by loader), for which contents of the

location in the new version of firmware was not predicted (¶: 65, Aghera et al. teaches

setting up patch block to insure that the patch installation). Therefore, it would have

been obvious to a person of ordinary skill in the art at the time the invention of Sahinoja et al. to specifically include the teachings of Aghera et al. for the purposes of updating firmware in mobile device through block or node modification.

Regarding claim 16. a method for generating an update package stored in a computer readable medium using an old image and a new image of a firmware in a mobile services network, the method comprising:

converting symbols in the new and old images of the firmware into distance information (¶: 16-17, Sahinoja et al. teaches comparison according to predetermined criteria to updating mobile device);

determining a list of nodes in the old and new images of the firmware (¶: 23, Sahinoja et al. teaches a plurality nodes in a hierarchical structure of information);

generating filter information (¶: 19-20, Sahinoja et al. teaches filter information being generated);

wherein generating filter information comprises capturing information regarding addresses where the contents of the location in the new image of firmware was able to be predicted (¶: 10, 12, 20, 23-25, Sahinoja et al. teaches address management for nodes and software updates).

generating the update package to be stored in a computer readable medium (¶: 16-19, fig. 4; Sahinoja et al. teaches hierarchical structure of a plurality of nodes and generating section of response to be transmitted); and

outputting the generated update package (¶: 16-19, fig. 4; Sahinoja et al. teaches

hierarchical structure of a plurality of nodes and generating section of response to be

transmitted);

however, Sahinoja does not discloses wherein determining comprises predicting

the contents of locations in the new version of firmware based on differences in

addresses identified between corresponding symbols in an old version of firmware and

the new version of firmware, and identifying as nodes corresponding locations in the old

image of firmware and the new image of firmware for which contents of the location in

the new image of firmware was not able to be predicted; nevertheless, Aghera et al.

teaches wherein determining comprises predicting the contents of locations in the new

version of firmware based on differences in addresses identified between corresponding

symbols in an old version of firmware and the new version of firmware (¶: 57-59, Aghera

et al. teaches blocks are set for DSP Patch Version for a particular patch followed by

memory address of DSP Patch Data for that particular patch, as shown in Fig. 10), and

identifying as nodes corresponding locations in the old image of firmware and the new

image of firmware for which contents of the location in the new image of firmware was

not able to be predicted (¶: 65, Aghera et al. teaches setting up patch block to insure

that the patch installation). Therefore, it would have been obvious to a person of

ordinary skill in the art at the time the invention of Sahinoja et al. to specifically include

the teachings of Aghera et al. for the purposes of updating firmware in mobile device

through block or node modification.

Regarding claim 22. a method for generating an update package to be stored in a computer readable medium using an old image and a new image of a firmware for a mobile electronic device in a mobile services network, the method comprising the steps of:

converting symbols in the new and old images of the firmware into distance information (¶: 16-17, Sahinoja et al. teaches comparison according to predetermined criteria to updating mobile device); determining a list of nodes in the old and new images of the firmware (¶: 23, Sahinoja et al. teaches a plurality nodes in a hierarchical structure of information).

generating information for a first filter (¶: 19-20, Sahinoja et al. teaches filter information being generated); creating a partially modified old image of the firmware utilizing the first filter; generating information for a second filter (¶: 24, Sahinoja et al. teaches through management related information generating partially, from gathered information, section information in a node in the hierarchical structure for modification); creating a modified old image of the firmware utilizing the second filter and the partially modified old image of the firmware; generating the update package to be stored in a computer readable medium (¶: 24, Sahinoja et al. teaches through management related information generating partially, from gathered information, section information in a node in the hierarchical structure for modification, furthermore, this done throughout the structure of plurality of nodes...the management system has memory therefore having a computer readable medium as seen in figure 5); outputting the generated update package (fig. 5 shows communication between the management device and the

mobile terminal or client device); and

however, Sahinoja et al. does not discloses wherein determining comprises predicting
the contents of locations in the new version of firmware based on differences in
addresses identified between corresponding symbols in an old version of firmware and
the new version of firmware, nevertheless, Aghera et al. teaches wherein determining
comprises predicting the contents of locations in the new version of firmware based on
differences in addresses identified between corresponding symbols in an old version of
firmware and the new version of firmware (¶: 57-59, Aghera et al. teaches blocks are set
for DSP Patch Version for a particular patch followed by memory address of DSP Patch
Data for that particular patch, as shown in Fig. 10).

indentifying as nodes corresponding locations in the old image of firmware (¶: 58-
60, Aghera et al. teaches loading information in said memory of device by loader) and
the new image of firmware for which contents of the location in the new image of
firmware was not able to be predicted based upon the old image of firmware (¶: 65,
Aghera et al. teaches setting up patch block to insure that the patch installation).

Therefore, it would have been obvious to a person of ordinary skill in the art at
the time the invention of Sahinoja et al. to specifically include the teachings of Aghera et
al. for the purposes of updating firmware in mobile device through block or node
modification.

Consider claim 2. The network according to claim 1, wherein the generator with
nodes preprocessor generates update packages by comparing an old version and a

new version of firmware (¶: 16-17, Sahinoja et al. teaches comparison according to
predetermined criteria to updating mobile device).

Consider claim 3. The network according to claim 2, wherein the update
packages are populated into the update package repository (¶: 19-23, Sahinoja et al.
teaches management system to replace nodes of information in memory of mobile
device).

Consider claim 4. The network according to claim 2, wherein the generated
update packages incorporate filter information (¶: 17-23; Sahinoja et al. teaches filter
information).

Consider claim 5. The network according to claim 2, wherein the generated
update packages incorporate node information (¶: 14-16, 19, Sahinoja et al. teaches
node information in update packages).

Consider claim 6. The network according to claim 1, wherein the management
server and the update package repository are communicatively coupled (¶: 17-19, 50-
52; Sahinoja et al. teaches management and update package are interacting with each
other).

Consider claim 7. The network according to claim 1, wherein the generator with
nodes preprocessor and the update package repository are communicatively coupled
(¶: 16-19, Sahinoja et al. teaches a management system wherein nodes are pre-
process and generated with update package repository, hence communicatively
coupled).

Consider claim 8. The network according to claim 1, wherein the generator with nodes preprocessor is located at a remote location from the update package repository (Sahinoja et al. discloses the claimed invention except for having the generator with nodes preprocessor located at a remote location from the update package repository. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have the generator with nodes preprocessor located at a remote location from the update package repository, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70).

Consider claim 9. The network according to claim 1, wherein the mobile electronic device comprises:

a non-volatile memory (¶: 32, Aghera et al. teaches flash memory in mobile terminal, which is to say non-volatile memory, which all mobile electronic devices have nowadays);

a random access memory (¶: 32, Aghera et al. teaches flash memory in mobile terminal, which is to say non-volatile memory, which all mobile electronic devices have nowadays); and

security services (¶: 76, Sahinoja et al. teaches authentication process between the client device and the DM).

Consider claim 10. The network according to claim 9, wherein the non-volatile memory comprises: an update agent (fig. 5 element 320 client DM Agent, Sahinoja et al. teaches update agent in mobile terminal); a firmware (¶: 15-16, 33, Sahinoja et al. teaches software update) and real-time operating system (¶: 38, Aghera et al. teaches

device communicating with management system, doing operations in real-time hence

having an operating system); a download agent (fig. 5 element 320, Sahinoja et al.

teaches client DM agent with SyncML DM protocol section for downloading information);

and a boot initialization (¶: 36, Aghera et al. teaches reboot after firmware update,

hence, boot initialization).

Consider claim 11. The network according to claim 10, wherein the non-volatile

memory further comprises an operating system layer (¶: 32, Aghera et al. teaches flash

memory in mobile terminal, which is to say non-volatile memory, which all mobile

electronic devices have nowadays).

Consider claim 12. The network according to claim 10, wherein the non-volatile

memory further comprises an end-user-related data and content unit (fig. 5, client

device 30, elements 300 and 320, Sahinoja et al. teaches content unit since the DM tree

contains nodes of information of the user related data...see reference for more details).

Consider claim 13. The network according to claim 10, wherein the mobile

electronic device executes an update process according to the following:

downloading an update package from the update package repository (fig. 5,

Sahinoja et al. teaches downloading update package from repository to client);

rebooting (¶: 36, Aghera et al. teaches reboot after firmware update, hence, boot

initialization); executing the boot initialization (¶: 36, Aghera et al. teaches reboot after

firmware update, hence, boot initialization); determining whether an update process is

needed (¶: 57, Sahinoja et al. teaches mobile terminal determines if session is needed);

and invoking the update agent (¶: 57, Sahinoja et al. teaches communicating with server client management for updates).

Consider claim 14. The network according to claim 13, wherein the mobile electronic device determines the need for an update process based on status information (¶: 57, Sahinoja et al. teaches mobile terminal determines if session is needed).

Consider claim 15. The network according to claim 13, wherein the mobile electronic device invokes the update agent to execute the update process if it is determined an update process is needed (¶: 57, Sahinoja et al. teaches communicating with server client management for updates).

Consider claim 17. The method according to claim 16 wherein the distance information is determined by locating the symbols of the old image and the new image (¶: 16-17, Sahinoja et al. teaches comparison according to predetermined criteria to updating mobile device).

Consider claim 18. The method according to claim 16 wherein the determining comprises:

determining addresses of symbols in the old image (¶: 16, 20-24, Sahinoja et al. teaches determining addresses of symbols in software in mobile terminal);

determining addresses of corresponding symbols in the new image (¶: 20-21, Sahinoja et al. teaches relating information to hierarchical structure of a plurality of nodes connected to the selected node);

comparing the differences in the addresses of the corresponding symbols in the old image and the new image (¶: 16-17, Sahinoja et al. teaches comparison according to predetermined criteria to updating mobile device);

predicting differences in addresses of subsequent symbols based on the differences in the addresses of previous symbols (¶: 57-59, Aghera et al. teaches blocks are set for DSP Patch Version for a particular patch followed by memory address of DSP Patch Data for that particular patch, as shown in Fig. 10);

determining the symbols for which offsets cannot be predicted (¶: 65, Aghera et al. teaches setting up patch block to insure that the patch installation); and

using the unpredictable symbols as additional node symbols (¶: 58-60, Aghera et al. teaches loading information in said memory of device by loader).

Consider claim 19. The method according to claim 16, wherein a pre-predict phase is performed to generate filter information, and wherein the pre-predict phase comprises:

identifying instructions using instruction prediction (fig. 4, ¶: 110-111, 114-116, Sahinoja et al. teaches exploration of nodes identifying nodes or instructions, hence, instruction prediction upon request);

fixing address locations and producing filter information (¶: 117-119, Sahinoja et al. teaches filter information produce after determining address locations); and

fixing data and producing filter information using block hunting (abstract, ¶: 120-124, Sahinoja et al. teaches updating data blocks or nodes that have been identified by address as needed to update).

Consider claim 20. The method according to claim 16 wherein the filter information comprises node location (¶: 117-119, Sahinoja et al. teaches filter information produce after determining address locations) and address range information where prediction was successful (¶: 109-110, Sahinoja et al. teaches address identification).

Consider claim 21. The method according to claim 16, wherein a pre-predict phase is performed to generate filter information (¶: 117-119, Sahinoja et al. teaches filter information produce after determining address locations), and wherein the pre-predict phase is followed by a predict phase, wherein the predict phase comprises:

performing instruction prediction utilizing the generated filter information (fig. 4, ¶: 110-111, 114-116, Sahinoja et al. teaches exploration of nodes identifying nodes or instructions, hence, instruction prediction upon request); and

executing block hunting utilizing the generated filter information (abstract, ¶: 120-124, Sahinoja et al. teaches updating data blocks or nodes that have been identified by address as needed to update).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEGO HERRERA whose telephone number is (571)272-0907. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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